

ABSTRACT

Force amplifying means 5 comprises a tapered member 41 extending vertically downward from the lower end of an operating rod 3, a disk member 42 provided at the upper end of a valve stem 16, and front and rear pivotal members 43, 44 arranged between the two members 41, 42 and opposed to each other with the tapered member 41 positioned therebetween, the pivotal members 43, 44 being pivotally movable about respective pivots 45, 46. Each of the pivotal members 43, 44 has a plate body 43a, 44a, an upper contact face 43b, 44b formed on an upper portion of the body and in bearing contact with a tapered face of the tapered member 41, and a lower contact face 43c, 44c formed on a lower portion of the body and bearing on the upper surface of the disk member 42. The lower contact face 43c, 44c of each pivotal member is in the form of a circular-arc cam face centered about a center line positioned away from the axis of the pivot 45, 46.